Dishwasher — Technical Information

EDW5505EPS EDW5505ESS PLD4460REC

- Due to possibility of personal injury or property damage, always contact an authorized technician for servicing or repair of this unit.
- Refer to Service Manual for detailed installation, operating, testing, troubleshooting, and disassembly instructions

⚠ CAUTION

All safety information must be followed as provided in Service Manual.

⚠ WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to dishwasher before servicing.

Benefits	EDW5505E*	PLD4460REC
Wash cycles	6	6
Heavy Wash	X	X
Normal Wash	X	X
Quick Wash	X	
Light Wash		X
Insta Wash		X
Auto Clean		X
Rinse Only	X	X
Features		
Sound package	Silent Pack 4000	QuietSeries™ 300
High Temp Wash	X	X
Electronic Controls	X	X
Sanitizer	X	X
Sensor clean	X	X
Water Filtration	Micro-Fine Plus Filtration	Micro-Fine Plus Filtration
Delay Start	2,4,6 Hour Delay Start	1-9 Hour Delay Start
Energy Star	X	X
Hard Food Disposer	X	X
Child lockout	X	X
Touch Pad Controls	12	12
Silverware Location	Wash Compartment	Wash Compartment
Specifications		
Power Source		
Voltage AC	120 VAC	120 VAC
Amperage (Single Unit)	15 A	15 A
Frequency	60 Hz	60 Hz
Dimensions		
Height–overall	33 ½" to 35 ¼"	33 ½" to 35 ¼"
Weight	71	71

Component Specifications

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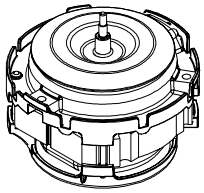
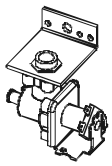
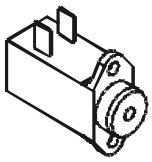
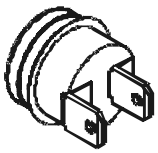
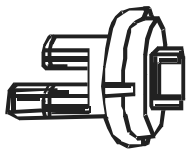
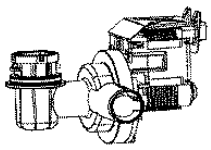
Illustration	Component	Test Procedure	Results
	Dishwasher Motor CCW rotation only viewed from shaft end. 1/3HP 120V/60hz, 3.2 amps, 3250 RPM Main Wattage, 285 watts Start Wattage, 1115 watts	Measure resistance from ST5 (Motor Common – blue) to ST8 (Motor Main - yellow).....	3 to 4 Ω
	Control Panel	See Service Specifications section labeled 'Membrane Readings' for troubleshooting/pin-out instructions.	
	Water valve 120V/60hz, 7 watts 1.13 ± .10 gpm at 20-120 psi	Measure resistance from J6 Pin 4 Aqua (Float switch) to ST4 Black (Common)	1.1 k Ω (This value assumes the float switch is closed).
	Dispenser wax motor 120V with 1/4" actuation stroke within 90 seconds	Measure resistance from J6 Pin 3 Tan (Dispenser) to ST4 Black (Common)	2 k Ω
	Limit Thermostat	Close on Temperature drop @ 149° F ± 7° F (Temp) ..... Open on Temperature drop @ 164° F ± 4° F (Temp)	0 Ω = Closed Infinite Ω = Open
	Sensor/Thermistor	10KΩ ± 3% at 77°F and 2.4 k Ω ± 6.5% at 140°F J5 pin 1 - Orange (Temp) to J5 Pin 4 -Red (Neutral)	Infinite Ω = Open 0 Ω = Closed
	Heater/Heating Element 120v/60hz, 650 watts ± 5% in air, 830 watts ± 5% in 90°F water	Measure resistance from ST1 Red/Black (Heater) to ST11 White (Common)	16 Ω (This value assumes the high limit thermostat is closed).
	Drain Motor 120v/60hz 45 watts	Measure resistance from ST6 Gray (Drain) to ST4 Black (Common)	25 Ω

Service Specifications

⚠ WARNING

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Manual Function Test

A Manual Function Test may be started by pressing the **Air / No Heat Dry** key 5 times followed by the **Start** key within 8 seconds.

The **Normal Wash** LED will **Flash** 3 times indicating manual test mode is active. Specific keypads will turn on or off a component as follows:

KEY	Function	LED
Hi Temp	Wash Motor	Hi Temp
Delay	Water Inlet Valve	Delay
Air / No Heat Dry	Heating Element	Air / No Heat Dry
Normal		
First Press	No Action	Heavy Wash
Second Press	Dispenser	Normal Wash
Third Press	Drain Pump	China Crystal

The test will cancel 120 seconds after the last keypad is pressed. The display (if available) will show '99' until the remaining timeout period is less than 99 seconds. At this point it will countdown until the modes times out, is cancelled, or another key is pressed. To cancel test, press the **Start / Cancel** keypad.

Diagnostic Tips

To check control, LED's and components, enter **Field Service Test**. If control fails to perform sequence as described, and a fault is detected, determine failure as described in the **Field Service Test**. If a load component failure has been diagnosed, proceed to the **Manual Function Test**. To check individual load components for proper operation, enter **Manual Function Test**. Follow test procedure as described. Repair or replace component as needed.

Note: The **High Current** or **Low Current Motor Error** may be detected during a wash cycle selected by a consumer. If this happens, the control will go into a 30 second auto restart mode and shut down if the unit is not able to restart the motor.

Optimized Wash Cycle

The Optimized Wash Mode is a special service mode that is designed to alter the Normal Wash cycle to improve wash performance. Once the Optimized Wash Mode is enabled, it cannot be disabled. To enable the Optimized Wash Mode on front and top display models, press Normal Wash and Heated Dry for 3 seconds. For all other display models, press Heated Dry and Hi Temp Wash / Extra Rinse for 3 seconds. All the display lights will illuminate momentarily to confirm the mode is enabled.

Membrane Readings (All Models)

	Connector	Measure Between
Heavy Wash *	J1	Pin 9 - Pin 5
Normal Wash *	J1	Pin 9 - Pin 6
China Crystal *	J1	Pin 9 - Pin 7
Rinse Only *	J1	Pin 9 - Pin 8
Auto *	J1	Pin 10 - Pin 5
Air / No Heat Dry	J1	Pin 11 - Pin 5
Sanitize *	J1	Pin 11 - Pin 6
Hi Temp	J1	Pin 11 - Pin 8

An unpressed switch will read as an open circuit.
A pressed switch will read as 10kΩ.
* On select models

Field Service Test

A Field Service Test may be started by pressing the **Air/No Heat Dry** key 6 times followed by the **Start** key within 8 seconds. This test must be performed with clean water to insure proper sensor performance.

"88" will appear in the display (if available*) and the following sequence of events will occur:

SECONDS	FUNCTIONS / ACTIVE LOADS
106	Water Valve
5	Thermistor check / Turbidity Sensor check & calibration - no loads active.
120	Wash Motor / Dispenser Wax Motor
180	Wash Motor / Heater
120	Drain Pump
4	Water Valve

The time for the Thermistor check / Turbidy Sensor check & calibration may vary slightly.

The Field Service Test will not repeat. The **Heavy Wash** LED will **Flash** during the test mode. All Indicator lights (except **Heavy Wash**) will illuminate. If the dishwasher door is opened during the test, the test sequence will pause, and resume when the door is closed. To the cancel test, press the **Start / Cancel** keypad.

The control has been designed to test the Sensor, Memory, and Motor. During the Field Service Test, if a fault has been detected, the test will abort any time after the motor current has been checked and 2 or more LED's will begin to **Flash**. A **Memory / Software Check** will occur immediately after the test is started. The **(Delay / Delay 2 hr)** LED and one of the following:

Turbidity Sensor - failure - **Hi Temp** LED
Thermistor - failure - **Heavy Wash** LED
Motor - high current - **Normal Wash** LED
Motor - low current - **China / Crystal Wash** LED
Memory Failure - **Air / No Heat Dry** LED

* On select models

Membrane Readings (Front & Top Controls)

	Connector	Measure Between
Short/Quick *	J1	Pin 12 - Pin 5
Delay Start *	J1	Pin 11 - Pin 7
Model ID Jumper *	J1	Pin 12 - Pin 8
Model ID Jumper *	J1	Pin 12 - Pin 6
Start / Cancel	J3	Pin 9 - Pin 5
Favorite Cycle *	J3	Pin 9 - Pin 6

(Top Only Controls)

	Connector	Measure Between
Short/Quick *	J1	Pin 12 - Pin 5
Model ID Jumper *	J1	Pin 12 - Pin 6
Model ID Jumper *	J1	Pin 12 - Pin 7
Start Cancel	J1	Pin 13 - Pin 12
Delay	J1	Pin 12 - Pin 14

An unpressed switch will read as an open circuit.
A pressed switch will read as 10kΩ.
* On select models

Load Readings

	Measure Between	Result
Heater[1]	ST1 (Heater) - ST11 (Dlb Neutral)	16Ω
Wash Motor	ST5 (Motor Common) - ST8 (Motor Main)	3 to 4Ω
Drain Motor	ST6 (Drain) - ST4 (Dlb Line)	25Ω
Dispenser Wax Motor	J6 Pin 3 (Disp) - ST4 (Dlb Line)	2kΩ
Water Valve[2]	J6 Pin 4 (Inlt) - ST4 (Dlb Line)	1.1kΩ
Thermistor	J5 Pin 1 (Temp) - J5 Pin 4 (Neutral)	See Component Info

Notes:
1. This value assumes the high limit thermostat is closed.
2. This value assumes the float switch is closed.
3. Results are approximated values.

Electrical Diagnostics

WARNING

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Resistance Check Points and Values
Thermistor (thru harness only with connector unplugged)***
10K* +/- 3% @ 77°F
2.4K* +/- 6.5% @ 140°F
*Vent WM (1.2K**)
Disp. WM (2K**)
Water Valve (1.1K**) (float switch must be closed)
Drain Motor (25**)
Pin # 1 2 3 4 5 6 7 8
OR RD RD AQ PU BK
J5
Pin # 1 2 3 4
PU TN AQ
J6
Circuit Board
Stake Lug 11 10 9 8 7 6
WH WH YL GY
5 4 3 2 1
BU BK BK RD
BK
Wash Motor (3 - 4**)
Heater (14.5 - 16.5**) (High limit t'stat must be closed)

1 **Use the "Manual Function Test" as described on the electrical schematic sheet to check components before opening the door to perform continuity testing or replacing parts.**

2 **To check continuity from ends of power leads to control board through door switches:**
(A white plastic latch must be inserted in the latch assembly for this test.)
> With one ohm meter lead connected to the white (neutral) power lead, you should have continuity at stake lugs 10 & 11.
> With one ohm meter lead connected to the black (line) power lead, you should have continuity at stake lugs 3 & 4, and pin # 8 on connector J5.

3 Perform the resistance checks on the component(s) in question at the locations shown on the chart.

* Select Models Only.

** Nominal value for ohms of electrical resistance of component only. These values will vary slightly due to the additional resistance of the wire harness. Greater variation can occur if the component is still warm from being energized during testing.

*** A resistor in the control board wired in parallel will result in an approximate reading of 4.0 k ohms with connector J5 plugged in.

Always remove power to the unit before performing any resistance or continuity checks.

Control Definition / Motor Connections

WARNING

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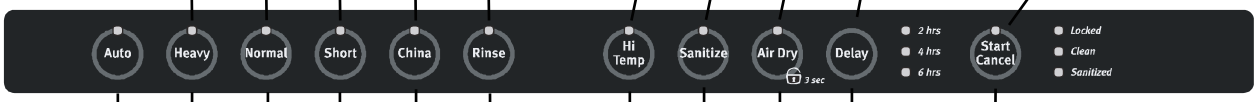
PLD4460REC

Used to automatically start the cycle at a later time. See **Use and Care Guide** for instructions.

EDW5505E**



Designed to select the number of water fills best suited for the soil level of each load. Turbidity Sensor is active with this cycle.

Long cycle for heavy food soils.

Medium cycle for average food soils. Turbidity Sensor active with this cycle.

Quick cycle for light food soils. Does not include drying time.

Short cycle for light food soils.

Rinses dishes being held until there is a full load.

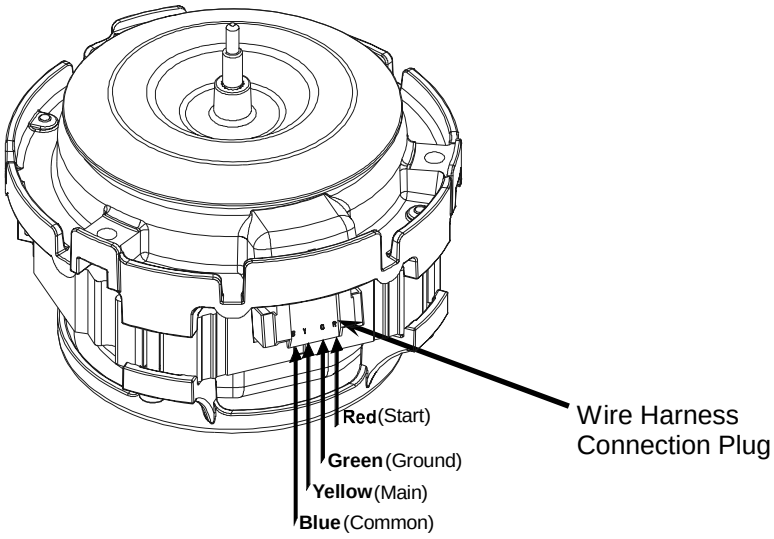
Hi Temp provides additional heat during the wash portion of the cycle, which ensures proper water temperature for better cleaning and drying results. It also adds an additional rinse to the cycle which improves results in hard water situations.

Sanitizes dishware. When cycle monitor recognizes that the proper conditions have been met, Sanitized light will activate at the end of the cycle. Sanitization may not be achieved if there is an interruption of the cycle, power failure or if the incoming water temperature is below 120° F (49° C).

When Air / No Heat Dry is selected, towel drying of some items such as plastic and items with non-stick surfaces may be necessary, and more moisture may be noticed adhering to the dishwasher interior. Vapor will escape even if Air Dry is selected. Pressing for 3 seconds locks control touchpad to prevent unwanted use. See **Use and Care Guide** for instructions.

Used to automatically start the cycle at a later time. See **Use and Care Guide** for instructions

Starts and stops dishwasher. See **Use and Care Guide** under **Operation: Operating the Dishwasher**, for explanation



1/3HP
120V/60hz, 3.2 amps, 3250 RPM

Cycle Chart

WARNING

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RINSE ONLY CYCLE
9 Minutes

FILL 1:36 min 1:46 max	RINSE 5:00	DRAIN 2:00	FILL 0:02

Available Options:
No options are available with the **Rinse Only** cycle.

DRY CYCLE (Front Only Display Models)

HEATER ON 3:00	HEATER OFF 1:30	HEATER ON 1:00	HEATER OFF 1:30	HEATER ON 1:00	HEATER OFF 1:30	HEATER ON 1:00	HEATER OFF 1:30	HEATER ON 1:00	HEATER OFF 9:30

Note: If **Heated Dry** is not selected, the heater will not be activated during the dry cycle.

INSTA WASH CYCLE
20 Minutes - Min
51 Minutes - Max

FILL 1:36 min 1:46 max	DET DISP	HEATED WASH 4:00	DRAIN 2:00	FILL 1:36 min 1:46 max	HEATED RINSE 2:00	DRAIN 2:00	FILL 1:36 min 1:46 max	HEATED RINSE 3:00	DRAIN 2:00	FILL 0:02

Available Options:
Only the **Heated Dry** option is available with the **Insta Wash** cycle.

DRY CYCLE (Front Top / Top Only Display Models)

HEATER ON 3:00 or 1:00	HEATER OFF 3:00	HEATER ON 1:00	HEATER OFF 3:00	HEATER ON 1:00	HEATER OFF 3:00	HEATER ON 1:00	HEATER OFF 3:00	HEATER ON 1:00	HEATER OFF 7:00 or 9:00

Notes: If **Heated Dry** is not selected, the heater will not be activated during the dry cycle.
If **160° Option** is selected, the first two minutes of heating is changed to 2 minutes of unheated at the end of the dry cycle.

LIGHT WASH CYCLE/ CHINA/CRYSTAL CYCLE/ GENTLE WASH/QUICK WASH
81 Minutes - Min
82 Minutes - Max

FILL 1:36 min 1:46 max	DET DISP	HEATED WASH 10:00	DRAIN 2:00	FILL 1:36 min 1:46 max	HEATED RINSE 10:00	DRAIN 2:00	TEMP CHECK SEE NOTE TC 1	DRAIN 2:00	FILL 1:36 min 1:46 max	HEATED RINSE 15:00	TEMP CHECK 140°F	RINSE AID DISP	RINSE 5:00	DRAIN 2:00	FILL 0:02	**DRY CYCLE** 30:00

Available Options:
Hi Temp Wash - This option boosts the final rinse temp check to 145°F.
Tough Scrub/Extra Wash/Hi Temp - This option adds an 8 minute pre-wash and 5 minutes of heated wash to the main wash.
Tough Scrub Plus/Super Scrub/Power Scrub - This option is the same as **Tough Scrub** but the main wash temp check is boosted to 145°F.

NORMAL WASH CYCLE
(97 Minutes - min)
(117 Minutes - max)

FILL 1:36 min 1:46 max	HEATED PRE WASH 8:00	DRAIN 2:20	FILL 1:36 min 1:46 max	DET DISP	HEATED WASH 26:00	HEATED WASH 2:00	TEMP CHECK SEE NOTE TC 1	DRAIN 2:00	FILL 1:36 min 1:46 max	HEATED PRE RINSE 10:00	RINSE AID DISP	TEMP CHECK SEE NOTE TC 2	HEATED RINSE 20:00	FILL 1:36 min 1:46 max	HEATED PRE RINSE 10:00	DRAIN 2:00	FILL 0:02	**DRY CYCLE** 30:00
		SKIP?				**SKIP?**				**SKIP?**								

Available Options:
Hi Temp Wash - Overrides the sensor's decision to modify the temp checks and skip a rinse.
Tough Scrub/Extra Wash/Hi Temp - This option overrides the sensor's decision to skip cycle functions / modify temp checks and adds an additional **5** minutes of heated wash to the main wash.
Tough Scrub Plus/Super Scrub/Power Scrub - This option is the same as **Tough Scrub** but the main wash temp check is boosted to 145°F.

TC 1: If sensor detects lighter soil, the temp check will be 128 ° F.
If sensor detects heavier soil, the temp check will be 140 ° F.
TC 2: If sensor detects lighter soil, the temp check will be 140 ° F.
If sensor detects heavier soil, the temp check will be 145 ° F.

HEAVY WASH CYCLE
(127 Minutes - min)
(133 Minutes - max)

FILL 1:36 min 1:46 max	HEATED PRE WASH 8:00	DRAIN 2:20	FILL 1:36 min 1:46 max	HEATED WASH 8:00	DET DISP	HEATED WASH 22:00	TEMP CHECK 140°F	DRAIN 2:00	FILL 1:36 min 1:46 max	PRE RINSE 10:00	DRAIN 2:00	FILL 1:36 min 1:46 max	HEATED PRE RINSE 10:00	DRAIN 2:00	FILL 1:36 min 1:46 max	HEATED PRE RINSE 10:00	DRAIN 2:00	FILL 1:36 min 1:46 max	HEATED PRE RINSE 10:00	DRAIN 2:00	FILL 0:02	**DRY CYCLE** 30:00
		SKIP?																				

Available Options:
Hi Temp Wash - This option has no effect on this cycle.
Tough Scrub/Extra Wash/Hi Temp - This option adds an additional 5 minutes of heated wash to the main wash and a 10 minute heated pre- rinse.
Tough Scrub Plus/Super Scrub/Power Scrub - This option is the same as **Tough Scrub** but the main wash temp check is boosted to 145°F.

AUTO CLEAN CYCLE/ SENSOR CLEAN CYCLE
(94 Minutes - min)
(128 Minutes - max)

FILL 1:36 min 1:46 max	HEATED PRE WASH 8:00	DRAIN 2:20	FILL 1:36 min 1:46 max	DET DISP	HEATED WASH 25:00	TEMP CHECK 140°F	DRAIN 2:00	FILL 1:36 min 1:46 max	HEATED PRE RINSE 10:00	DRAIN 2:00	FILL 1:36 min 1:46 max	HEATED PRE RINSE 10:00	DRAIN 2:00	FILL 1:36 min 1:46 max	HEATED RINSE 20:00	TEMP CHECK 145°F	RINSE AID DISP	RINSE 5:00	DRAIN 2:00	FILL 0:02	**DRY CYCLE** 30:00
		SKIP?																			

Available Options:
Hi Temp Wash - This option has no effect on this cycle.
Tough Scrub/Extra Wash/Hi Temp - This option overrides the sensor's decision to skip cycle functions and adds 5 minutes of Heated Wash to main wash.
Tough Scrub Plus/Super Scrub/Power Scrub - This option is the same as **Tough Scrub** but the main wash temp check is boosted to 145°F.

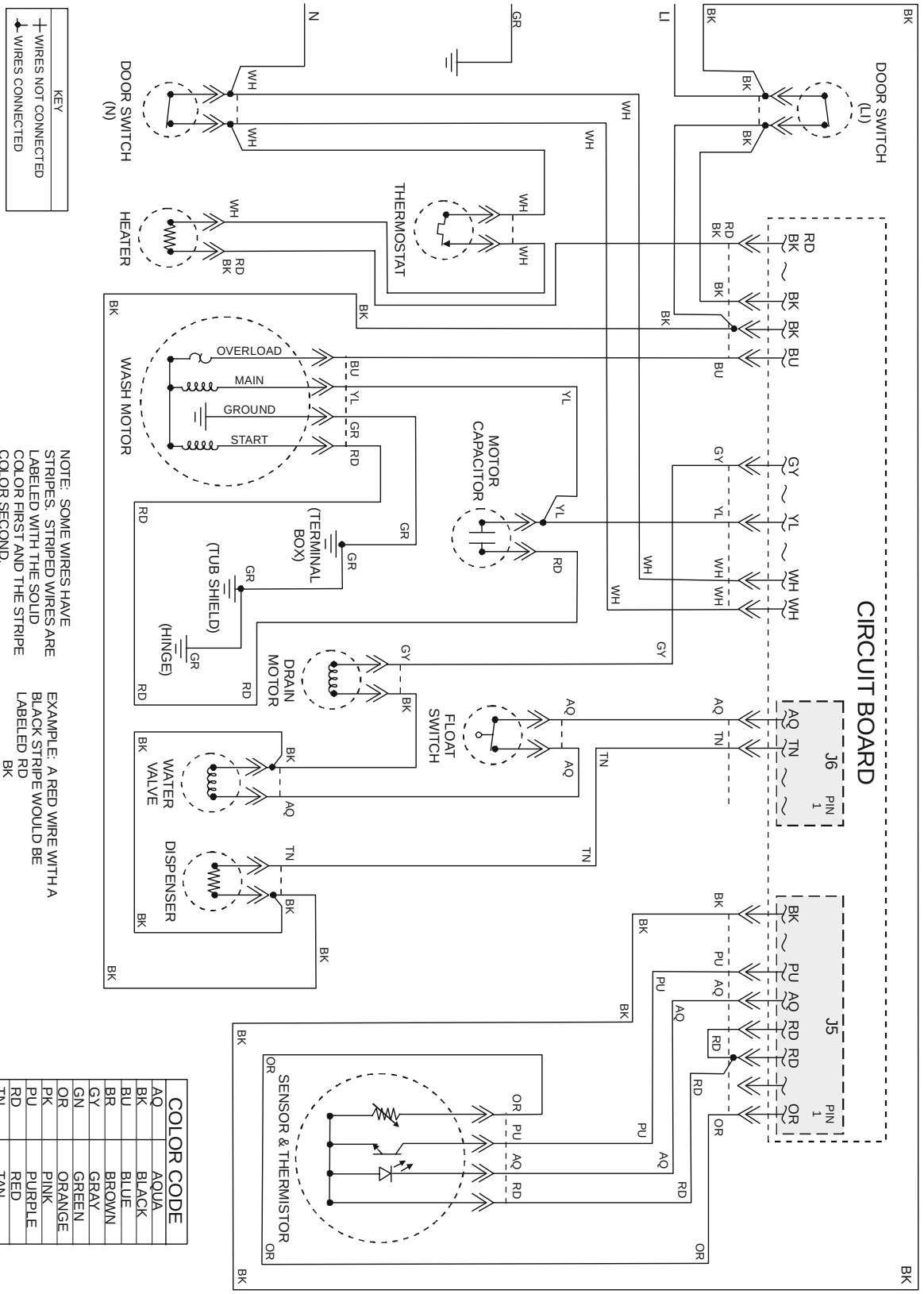
Temperature Options (Available on select models)
Sanitize: If the **Sanitize** option is available for a given cycle, it forces a 140°F temp check at the end of the main wash for the **Light Wash**, a 154°F temp check prior to the rinse aid dispense in the final rinse, and adds 5 minutes unheated circulation prior to rinse aid dispense.
160° Option: If the **160° Option** is available for a given cycle, it forces a 160°F temp check prior to the rinse aid dispense in the final rinse.

Notes
1. All times are approximate.
2. Temperature checks force a maximum 20 minute heating delay to reach the desired temperature.
3. The **Auto Clean/Sensor Clean** cycle definition gives the minimum and maximum possible cycle lengths. Actual cycle length and executed cycle functions will vary based on the sensor input.
4. Fill length varies between different models.

SKIP?

This represents the portion of a cycle that **MAY** be omitted. The determination of whether a segment is skipped or not is made by input from the sensor.

Wiring Diagram

WARNING

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